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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,443	05/01/2000	WEI CHEN	Q57774	1926

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WASHINGTON, DC 20037-3202

EXAMINER

KING, JUSTIN

ART UNIT	PAPER NUMBER
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2181

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/485,443

Applicant(s)

CHEN ET AL.

Examiner

Justin I. King

Art Unit

2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 1 and 3 start the node connection from the lowest priority, which contradicts from the illustration of the figures 2, 3D, and 3E. This office action will be written based on the illustration of the figures 2, 3D, and 3E. Further clarification is needed.

### *Drawings*

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 2181

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the “IEEE Standard for a High Performance Serial Bus”, Gorin et al. (U.S. Patent No. 5,020,059), and Douceur et al. (U.S. Patent No. 6,247,061).

Referring to claim 1: The IEEE standard discloses that it is known to group the nodes with the same speed capacity adjacent to one another and to reduce the number of hops (section 8.4.6.2). The implementation of these two approaches for optimizing 1394 efficiency is beyond the IEEE standard’s scope. Gorin teaches that it is known to minimize the tree depth (column 6, lines 31-33) for reducing the hops between the root and leaves; thus, it implicitly teaches placing the nodes with higher number of ports at the top of the tree. Douceur teaches that bandwidth reservation is known to guarantee resource (column 2, paragraphs 2-4). Since the isochronous transmission is a part of the 1394 features, the bandwidth reservation is a must practice; thus, the nodes at the top of the 1394 tree will need higher bandwidth to support the isochronous transmission. Hence, it would have been obvious to one having ordinary skill in the computer art to combine Gorin and Douceur’s teachings to implement the 1394’s optimizing principles because they enables one to minimize the number of hops and to support the 1394 isochronous transmission.

Referring to claims 2 and 5: Claims 1 and 3’s arguments apply; furthermore, since the 1394 node’s speed will be capped by the parent node, the priority is assigned to the higher speed node to support the full performance of the child nodes and the isochronous transmission.

Referring to claims 3-4: Claim 1’s argument applies; furthermore, since it is known to one in the computer art that any given node in a serial bus within the tree topology, except the beginning node and the ending node, must have at least 2 ports for connecting to its parent node

Art Unit: 2181

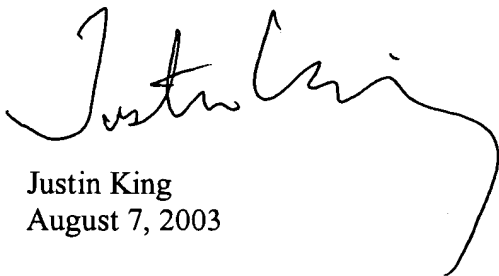
and child node (as illustrated in specification's figure 1); such that, It is obvious to one in the computer art that a serial bus with N number of nodes will need to have at least  $2N$  ports minus one port from each of the beginning node and the ending node, which concludes the total number of  $2N-2$  ports, which equals to  $2(N-1)$  ports.


***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin King whose telephone number is (703) 305-4571. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephones are unsuccessfully, the examiner's supervisor, Mark Reinhart can be reached at (703) 308-3110.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose number is (703)-306-5631.

  
Justin King  
August 7, 2003

  
GOPAL C. RAY  
PRIMARY EXAMINER  
GROUP 2300